

West Region
Cooperative Soil Survey Conference
June 19, 2008
Alan B. Price, NSSC-ITC

- NASIS originally released in 1994
- UNIX[®] based with INFORMIX[®] database management system
- Has had several updates
- Currently at version 5.4

- Converts current functionality of NASIS to Microsoft .NET[®] and SQL Server[®] platform
 - Current industry and agency standard
 - Will facilitate later integration of spatial data

- New interface
- Similar to other Microsoft[®] applications
 - Rearrange, hide/unhide, and resize columns
 - Sort on any column
 - Filter data
 - View all rows in any table

- Will be a client based application
 - SQL Server Express[®] on local computer
 - Connected via network to central server
 - Will download subset database (replica) to your computer
 - Uses replication processes to keep data synchronized with central server
 - Conflict resolution
 - Can disconnect your computer from network to edit data

- Report, query, and interpretation editors are different
 - Will work like Soil Data Mart Report Manager
 - Interpretation editor will automatically load sub-rules, evaluations, and property scripts

- Existing reports, queries, rules, evaluations, and properties will be converted
 - Many reports and queries will need revision due to data model changes
 - Interpretations should mostly be OK

- Revised Soil Survey Schedule schema
 - Includes Technical Soil Services
 - New Project data object
- Mapunit tables become separate data object – ownership by map unit

- Subaqueous soil proposals
- Mica proposal
- More anthropogenic choices
- Gypsum choices
- Data certification proposal
- National mapunit symbol
- Several minor additions/changes

- SSURGO changing edits will be made after 6.0 is released
 - These impact other applications such as Soil Data Mart, Web Soil Survey, Access templates, and Soil Data Viewer rules.

- The process will change
 - In 6.0, the pedon.mdb file will be converted into SQL Server Express[®] format on your local computer, then saved to NASIS

- Some training will be needed
 - New user interface and processes
 - Paul Finnell plans to update existing training modules
 - Plan to use Live Meeting or Net Meeting sessions as much as possible
 - Record sessions for later playback

- SQL Server Express[®] will need to be loaded on all computers.
- Some data clean-up
 - Choice list implemented for Principal Meridians
 - Names listed in Legend Staff table will be converted to NASIS User names – need to match.
- Guidance will be distributed

- Early testing has begun
- Beta testing – Sept/Oct 2008
- Final testing – Oct/Nov 2008
- Release 6.0 and convert data – Dec 2008

NASIS 6.0 Beta

File Edit View Tools Tables Help

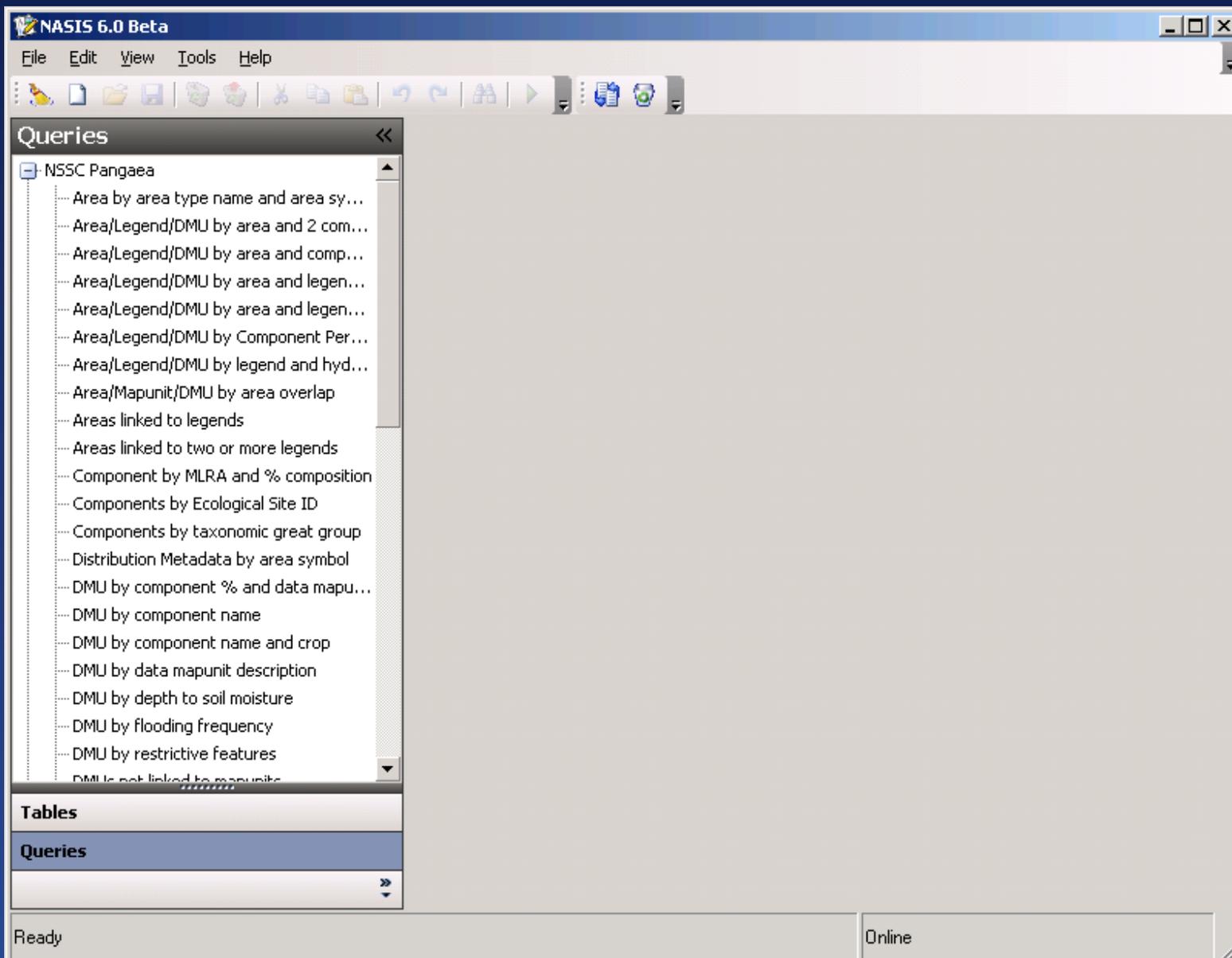
Tables

- + Area Type
- + Legend
- + Data Mapunit
- + Site Association
- + Transect
- + Site
- + Pedon
- + Geomorphic Feature Type
- + Plant
 - Local Plant
 - Ecological Site
- + Other Vegetative Classificatio...
- + USFS Ecological Classification ...
- + USFS Interpretation Category ...
- USFS Interpretation Restrictio...
- + Query
- + Report
- + Property
- + Evaluation
- + Rule
- + Calculation
- Edit Setup
- + Distribution Metadata
- NASIS User

Tables

Queries

Ready Online



The screenshot shows the 'Area by area type name and area symbol - NASIS 6.0 Beta' application window. The interface includes a menu bar (File, Edit, View, Tools, Help) and a toolbar with various icons. A green arrow labeled 'Run' points to the execution button in the toolbar. On the left, a 'Queries' pane lists various queries under the 'NSSC Pangaea' folder, with 'Area by area type name and area sy...' selected. The main window displays a SQL query in the 'Query' tab:

```
FROM area, area_type
WHERE area_type.area_type_name IMATCHES ? AND
area.area_symbol IMATCHES ? AND
JOIN area TO area_type
```

The screenshot displays the NASIS 6.0 Beta software interface. The main window is titled "Area by area type name and area symbol - NASIS 6.0 Beta". The "Queries" pane on the left lists various queries, with "Area by area type name and area symbol" selected. The main query editor shows the following SQL code:

```
FROM area, area_type  
WHERE area_type.area_type_name IMATCHES ? AND  
area.area_symbol IMATCHES ? AND  
JOIN area TO area_type
```

A "Parameters Area by area type name and area symbol" dialog box is open in the foreground. It contains the following fields and controls:

- Target Tables:** A list with checkboxes for "Area" (checked) and "Area Type" (unchecked).
- Area Type Name:** A text input field containing "non*".
- Area Symbol:** A text input field containing "al*".
- Buttons:** "Cancel" and "Run" buttons. A red arrow points to the "Run" button.

The status bar at the bottom of the window shows "Ready." on the left and "Ln 1 Ch 1" on the right.

Query Results [X]

 Your query has completed successfully.
69 records were selected for table Area.
Would you like to add these to your selected set?

```
Messages  
Prepari  
Running query for target table "Area"...  
complete.  
bol"...
```

```
Messages
Preparing query "Area by area type name and area symbol"...
Running query for target table "Area"...
    complete.
Adding results to selected set...
    complete.
Done!
Results for target table "Area":
    69 records selected by query.
    69 records added to selected set.
    0 related records added to selected set.
```

Messages

```
Preparing query "components by component name"...  
Running query for target table "Component"...  
  complete.  
Adding results to selected set...  
  complete.  
Done!  
Results for target table "Component":  
  22 records selected by query.  
  22 records added to selected set.  
  1236 related records added to selected set.  
|
```

Area - NASIS 6.0 Beta

File Edit View Tools Tables Help

Tables

- Area Type
 - Area
- Legend
- Data Mapunit
- Site Association
- Transect
- Site
- Pedon
- Geomorphic Feature Type
- Plant
 - Local Plant
 - Ecological Site
- Other Vegetative Classification Type
- USFS Ecological Classification Type (test)

	Seq	Area Symbol	Area Name	Area Acres
* Click here to add a new row				
<input type="checkbox"/>		AL001	Autauga County, Alabama	386300
<input type="checkbox"/>		AL003	Baldwin County, Alabama	1075510
<input type="checkbox"/>		AL005	Barbour County, Alabama	578540
<input type="checkbox"/>		AL007	Bibb County, Alabama	399980
<input type="checkbox"/>		AL009	Blount County, Alabama	414930
<input type="checkbox"/>		AL011	Bullock County, Alabama	401060
<input type="checkbox"/>		AL013	Butler County, Alabama	498650
<input type="checkbox"/>		AL015	Calhoun County, Alabama	392100
<input type="checkbox"/>		AL017	Chambers County, Alabama	386020

- Content management system
- Import USFS data from Terra
- Form-based data entry
- SSURGO - data model changes
- Spatial data integration
- Dynamic soil properties (soil change)
- Integrated resource inventory system
- Integration of lab data



- Beta testing SOON (volunteers?)
- Programming should be completed July 2008
- Available for general use once ITS in Kansas City deploys new servers and loads the applications

- Search function
 - Should help new users find desired information
 - Searches on keywords or phrases

Search

The screenshot displays the NRCS web application interface with several panels:

- Navigation Tabs:** Intro to Soils, Suitabilities and Limitations for Use (active), Soil Properties and Qualities, Ecological Site Assessment, Soil Reports.
- Search Panel:**
 - Basic Search: Enter keywords **ksat**
 - Advanced Search: (empty)
 - Results: "ksat": 39 matches. Includes categories like Soil Properties and Qualities (4 matches), Matched the Rating name (2 matches), Matched the Rating Description (6 matches), Ecological Site Assessment (0 matches), Cannot search: No Rangeland or Forestland ecological site data for specified AOI (0 matches), Soil Request (0 matches), Matched the Report Description (0 matches).
- Soil Map Panel:** Shows a map with a legend and a search icon.
- Glossary Panel:**
 - Definition: at saturation of air organic soil material.
 - Saturated hydraulic conductivity (Ksat)** (highlighted with a red circle): The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are:
 - Very high:** 100 or more micrometers per second (14.17 or more inches per hour)
 - High:** 10 to 100 micrometers per second (1.417 to 14.17 inches per hour)
 - Moderately high:** 1 to 10 micrometers per second (0.1417 to 1.417 inches per hour)
 - Moderately low:** 0.1 to 1 micrometers per second (0.01417 to 0.1417 inch per hour)
 - Low:** 0.01 to 0.1 micrometers per second (0.001417 to 0.01417 inch per hour)
 - Very low:** Less than 0.01 micrometers per second (less than 0.001417 inch per hour).
- Shopping Cart Panel:** Shows a list of items including 'Ksat' and 'Saturated hydraulic conductivity (Ksat)'.
- Suitabilities and Limitations Ratings Panel:**
 - Buttons: Open All, Close All
 - Table:

Category	Rating
Building Site Development	?
Construction Materials	?
Disaster Recovery Planning	?
Land Classification	?

- Clip, zip, & ship
 - Clips and downloads SSURGO data for the AOI

Clip, Zip, and Ship (AOI Data Download)

Download Soils Data for your AOI

Select Data to Download

Tabular Data

Template Database

Select Template Database

State	Microsoft Access Version	Template Database Version	Template Database Name
<input type="radio"/> NJ	Access 2002	32	soildb_NJ_2002
<input type="radio"/> NY	Access 2002	32.1	soildb_NY_2002
<input checked="" type="radio"/> OH	Access 2002	33	soildb_oh_2003
<input type="radio"/> OH	Access 2000	33	soildb_oh_2000
<input type="radio"/> OH	Access 97	33	soildb_oh_97
<input type="radio"/> OR	Access 2002	33.3	soildb_OR_2003
<input type="radio"/> OR	Access 2000	33.3	soildb_OR_2000
<input type="radio"/> PA	Access 2002	33.1	soildb_PA_2003
<input type="radio"/> PA	Access 2000	33.1	soildb_PA_2000

Spatial Data

Select Spatial Coordinate System

UTM Zone 17, Northern Hemisphere (NAD 83)

Delivery Options

Your Web Soil Survey download request will be placed in the order queue and processed in turn. These requests are processed every day between 6:00 AM MDT and 11:00 PM MDT.

Receive an email message notifying you when your Web Soil Survey download request is complete. This message will include a link from which you can download your soil data.

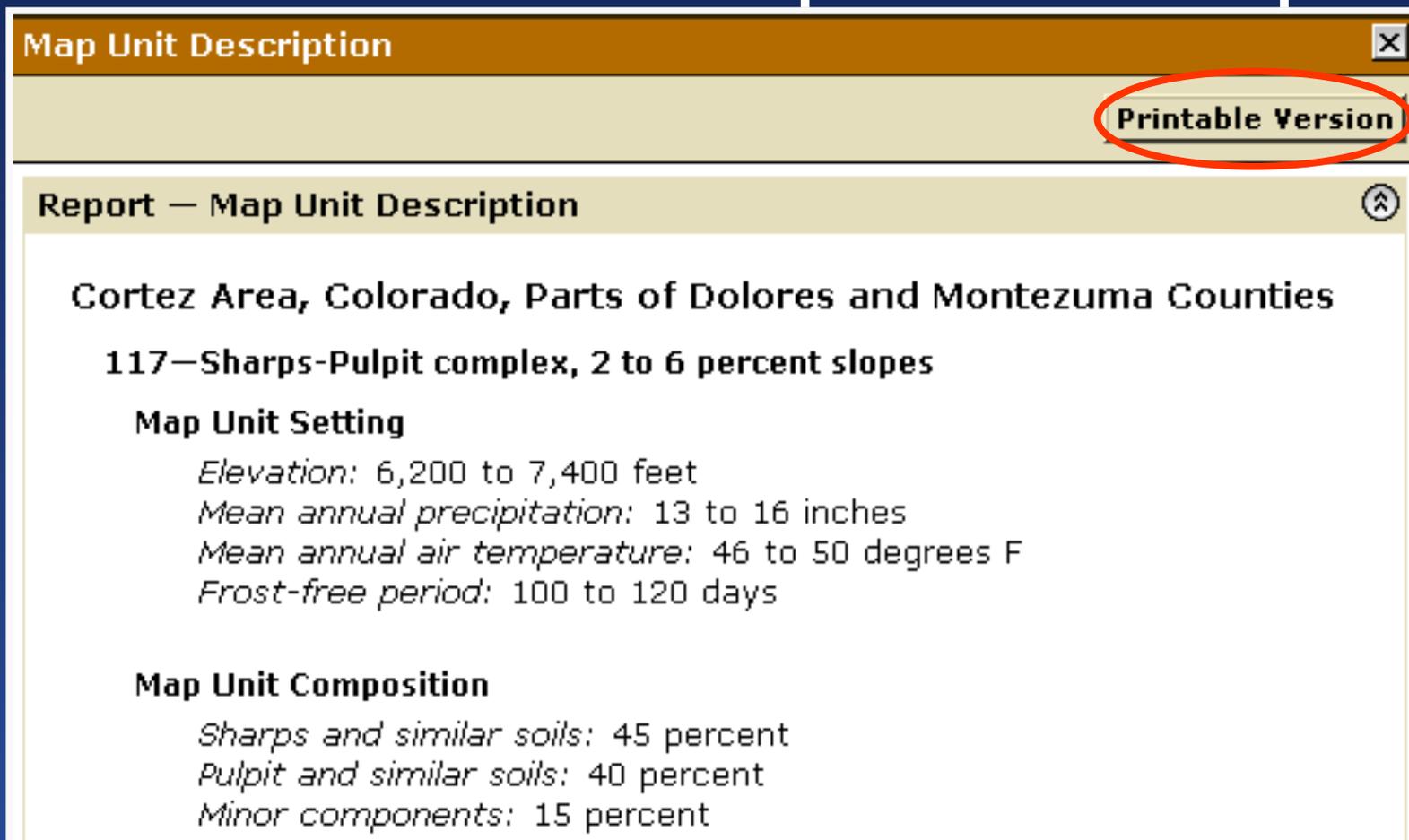
Address

Email

Cancel Download

- Spatial data downloaded in your choice of projection (UTM, State plane, geographic)
- Attribute data downloaded for import into a SSURGO template of your choice

- Print individual map unit descriptions



Map Unit Description ✕

Printable Version

Report — Map Unit Description ⤴

Cortez Area, Colorado, Parts of Dolores and Montezuma Counties

117—Sharps-Pulpit complex, 2 to 6 percent slopes

Map Unit Setting

Elevation: 6,200 to 7,400 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 100 to 120 days

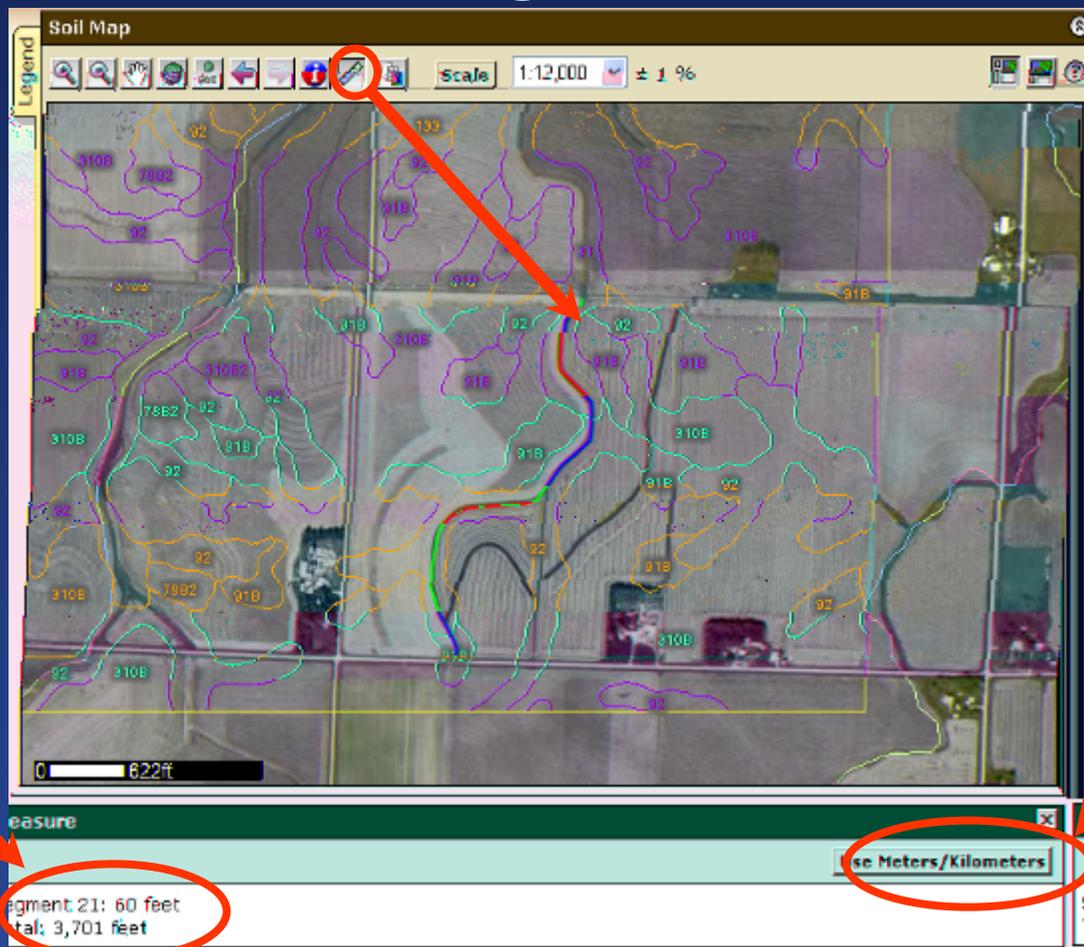
Map Unit Composition

Sharps and similar soils: 45 percent

Pulpit and similar soils: 40 percent

Minor components: 15 percent

- Linear measuring tool

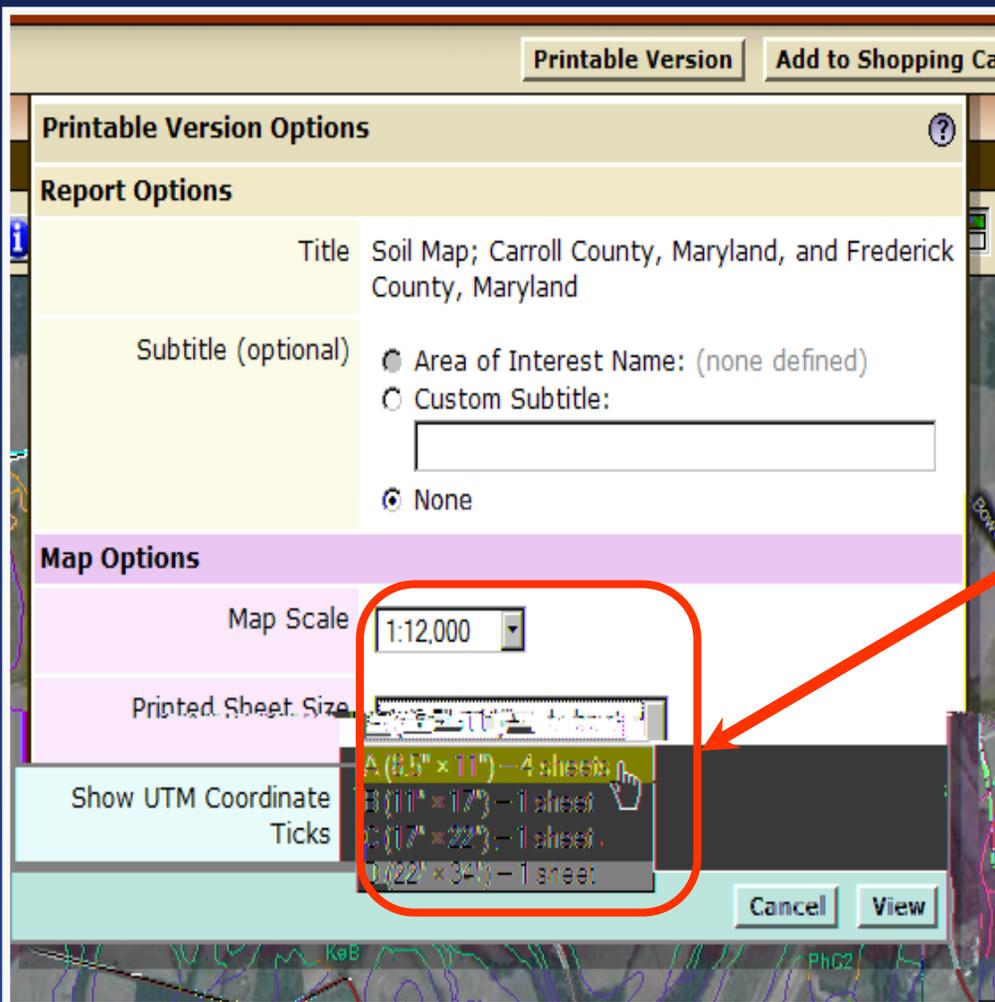


Distance for
Multiple
Segments
and Totals

Metric or
English
Dimensions

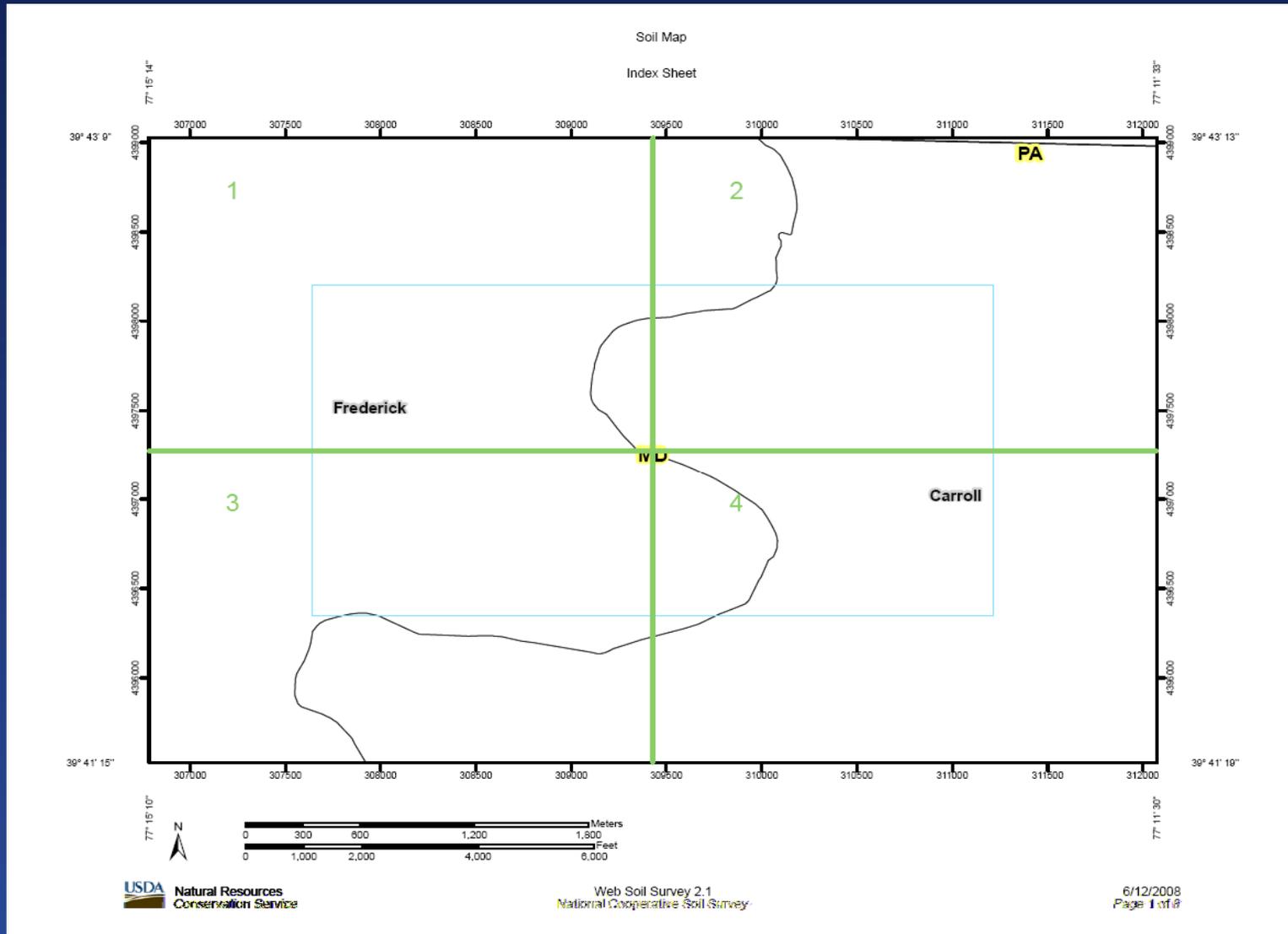
- Improved map unit symbol placement
- Disclaimers added
 - On-site investigation
 - Estimated vs. measured data
 - Maximum scale of maps
- New navigation data layers

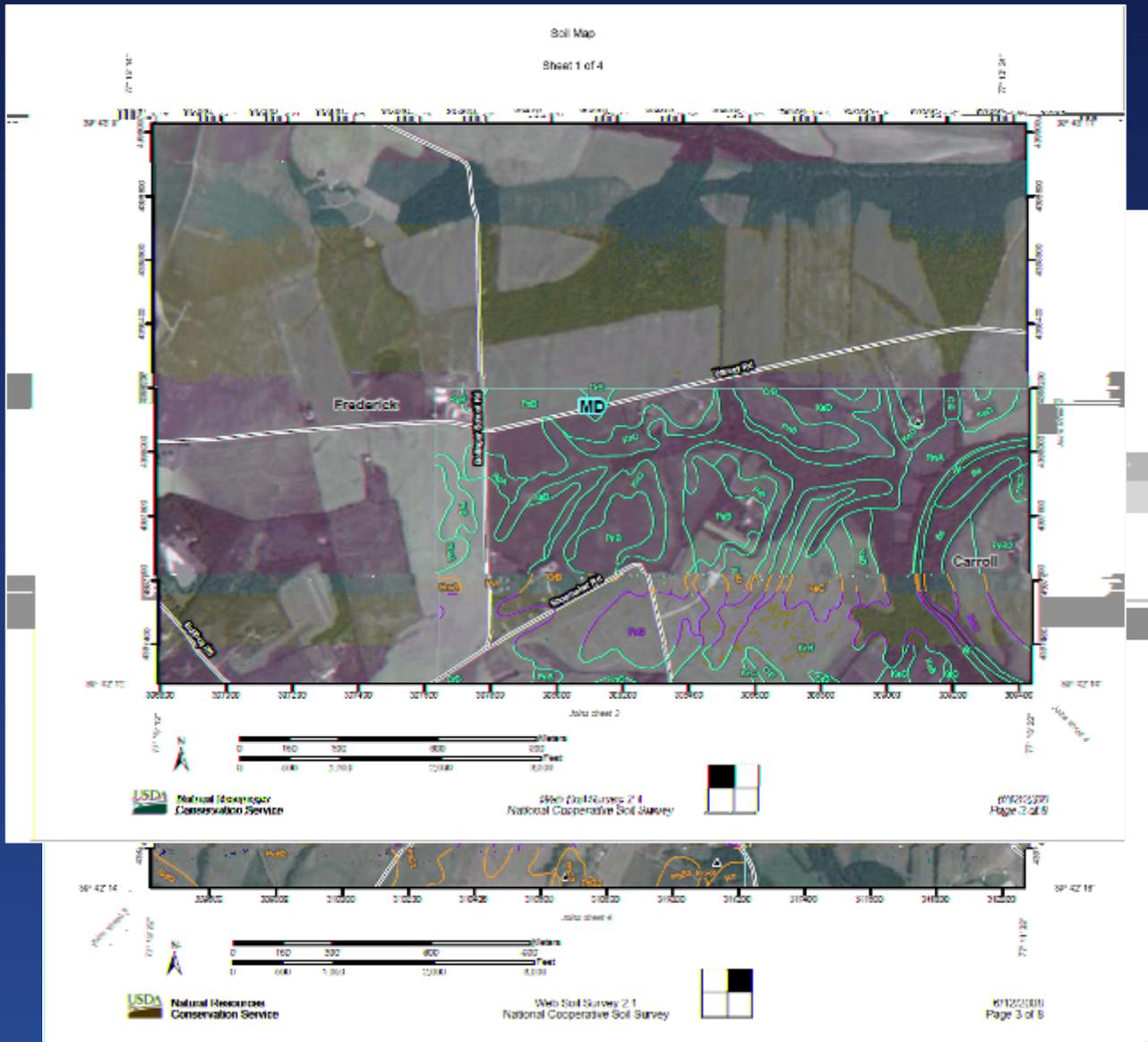
- Tiling of printed maps
 - Based on user selected scale and paper size
 - 2x2, 3x3, or 4x4
 - Includes map index sheet



- Scale
- Individual sheet size

Map Index Sheet





Individual Tiled Map Sheets

